

Appl. No. 10/604,703
RCE Submission dated Nov. 9, 2006
Reply to Fin. Off. Act. of Sept. 6, 2006 and Adv. Act. of Oct. 11, 2006

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REMARKS/ARGUMENTS

Introduction

1. The Examiner rejected claims 88, 95, 104 and 105 under 35 U.S.C. § 102(b) as being anticipated by Pacific Dunlop of Australia brochure on Exide Switch Technology ("Exide Switch Brochure"). Claims 88, 95, 104, and 105 were also rejected under 35 U.S.C. § 102(b) as being anticipated by Rodrigues (UK Patent Application Publication No. GB 2 220 112 A). Claims 88, 95, 104, and 105 were further rejected under 35 U.S.C. § 102(b) as being anticipated by Leppo et al. (U.S. Patent No. 6,172,478). Claims 89-92, 94, 96, and 97 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the Exide Switch Brochure. Claim 93 was rejected under 35 U.S.C. § 103(a) as being unpatentable over the Exide Switch Brochure in view of Geibl et al. Claims 99 and 100 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the Exide Switch Brochure in view of Hiroyuki et al. (Japanese Patent Publication No. JP-0568036). Claims 99-102 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the Exide Switch Brochure in view of prior art disclosed by Applicants, and further in view of Cook et al. (U.S. Patent No. 6,734,651). Claims 98 and 103 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the Exide Switch Brochure in view of Kreiger et al. (U.S. Patent No. 6,377,029). Reconsideration of this application is respectfully requested in view of the remarks provided herein and testimonial evidence submitted herewith.

Third Declaration of William Weiss (Submitted Herewith)

2. Applicants submit herewith the Third Declaration of William J. Weiss under 37 C.F.R. § 1.132 ("Third Weiss Declaration"). The declaration is being filed to provide technical expert testimony relative to Rodrigues and Leppo et al. (hereinafter "Leppo"), both of which were cited and relied upon by the Examiner for the first time in the Final Office Action. Applicants submit Mr. Weiss' new testimony controverts the Examiner's misinterpretation of Rodrigues and Leppo and misapplication thereof to claims 88, 95, 104, and 105 of the present application. In view of the foregoing, Applicants respectfully request entry of the Third Weiss Declaration into the present application. Additionally, in responding to this RCE Submission and the Third Weiss Declaration, Applicants respectfully request that the Examiner comply with

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the requirements of M.P.E.P. § 716.01(B), which provides “[a]ll entered affidavits, declarations, and other evidence traversing rejections *[must be] acknowledged and commented upon* by the examiner *in the next succeeding action*” and “[w]here the evidence is insufficient to overcome the rejection, the examiner *must specifically explain* why the evidence is insufficient.” (Emphasis added.) As discussed in detail below and in Applicants’ response dated September 26, 2006, the Examiner has to date failed to comply with this requirement with respect to Mr. Weiss’ Second Declaration filed April 28, 2006.

Legal Standard for Anticipation

3. In order to establish that a single prior art reference anticipates a pending claim, the Examiner must show that the reference discloses *each and every element* as set forth in the claim. See M.P.E.P. § 2131 (citing *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987)) (emphasis added). Moreover, the identical invention must be shown in the reference in as complete detail as is contained in the claim. See *id.* (citing *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989)). Further, the claim elements *must be arranged* in the reference *as required by the claim*, although identity of terminology is not required. See *id.* (citing *In re Bond*, 910 F.2d 831, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990)) (emphasis added). In other words, to make a proper anticipation rejection, the Examiner must show that the reference inherently or expressly discloses all the elements of Applicants’ claim and that the elements disclosed in the reference are arranged in the same manner as are the elements recited in Applicants’ claim. See *id.*

Rejections under 35 U.S.C. § 102(b)

4. Claims 88, 95, 104, and 105 were rejected under 35 U.S.C. § 102(b) as being anticipated by the Exide Switch Brochure. The Examiner has identically repeated the rejection of claims 88, 95, 104, and 105 set forth in Paragraph 4 of the Office Action dated March 30, 2006. As a result the Examiner re-asserts that the Exide Switch Brochure discloses all the limitations of Applicants’ pending independent claims, including the limitation that “the main battery and the at least one standby battery never supply electrical energy to the electrical system simultaneously.” For the reasons set forth below and in Applicants’ Amendments and

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Responses dated April 28, 2006 and June 15, 2006, as supported by the Second Declaration of Mr. William Weiss under 37 C.F.R. § 1.132 ("Second Weiss Declaration") which was also filed on April 28, 2006 and June 15, 2006, Applicants strongly disagree with the Examiner's characterization of the present invention in view of the Exide Switch Brochure.

Exide Switch Brochure Does Not Disclose All Limitations of, and Hence Does Not Anticipate, Applicants' Claims 88, 95, 104, and 105

Applicants clearly distinguished the Exide Switch Brochure from the recitations of Applicants' claims 88, 95, 104 and 105 in Applicants' responses dated April 28, 2006, June 15, 2006, and September 26, 2006. In each of those responses, Applicants devoted over three pages of text analyzing the contents of the Exide Switch Brochure and provided supplemental evidence in the form of the Second Weiss Declaration, two online published articles describing the Switch battery discussed in the Exide Switch Brochure, and a laboratory testing report for the Switch battery discussed in the Exide Switch Brochure issued by EG and G Idaho, Inc. under a contract with the Department of Energy (entitled "Laboratory testing of GNB switch 12 volt SLI (starting, lighting and ignition) battery"). This analysis and supplemental evidence clearly showed that the Exide Switch Brochure described a product in which the Main and Reserve batteries are connected in parallel when the battery selector switch is moved from the "Main" position to the "Reserve" position. As a result, the Exide Switch Brochure fails to disclose at least a switching device that permits use of a standby or reserve battery independently of the main battery to supply electrical energy to an electrical system, such that the main battery and the standby battery are never connected in parallel and, therefore, never supply electrical energy to the electrical system simultaneously as required by *all* of Applicants' independent claims. (See Second Weiss Decl. ¶¶ 20-21.) In other words, the Exide Switch Brochure does not disclose a switching device that, in a first operating position, connects the main battery, but not the standby battery, to the electrical system and, in a second operating position, connects the standby battery, but not the main battery, to the electrical system as required by all of Applicants' claims. Instead, the Exide Switch Brochure simply discloses a battery system that delivers electrical energy to an electrical system through a main battery either alone or in combination (i.e., in parallel) with a standby battery. (See *id.* ¶ 18.) Therefore, the Exide Switch

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Brochure is merely cumulative to the prior art already cited by the Examiner, including U.S. Pat. No. 6,229,279 issued Dierker et al., which prior art has been addressed repeatedly and at length by Applicants in previous Office Action responses, such prior responses and supporting declarations (including the first Declaration of Mr. William Weiss dated November 23, 2005 and the Second Weiss Declaration) being incorporated herein by this reference.

Applicants also pointed out in their responses dated April 28, 2006 and June 15, 2006 that Applicants are not unique in their understanding of the contents of the Exide Switch Brochure. Rather, as stated in Applicants' prior response, Applicants' understanding of the operation of the Switch battery disclosed in the Exide Switch Brochure is consistent with the understanding of others skilled in the relevant art. In particular, the Exide Switch Brochure was cited as prior art in U.S. Patent No. 5,162,164 issued to Dougherty et al. ("the '164 Patent") and U.S. Patent 5,002,840 issued to Klebenow et al. ("the '840 Patent"), as indicated on the front pages of those patents (which indication is acknowledged by the Examiner in Paragraph 14 of the present Final Office Action). At column 1, line 63, through column 2, line 18, of the '164 Patent, Dougherty et al. discuss the operation of the battery system disclosed in the Exide Switch Brochure and clearly state that the "two batteries are electrically configured *in parallel*, with a one-way diode disposed therebetween to prevent the reserve unit from discharging during periods of non-use." (See Second Weiss Decl. ¶ 19) (emphasis added). Thus, the Exide Switch Brochure fails to disclose or suggest a dual battery system in which the main battery and the standby battery are never connected in parallel and, therefore, never supply electrical energy to the electrical system simultaneously as required by all of Applicants' independent claims. (See *id.* ¶¶ 20-21.) By contrast, Applicants' apparatus includes main and standby batteries that *independently and separately* source electrical energy to the electrical system based on the then-current operating position of the switching device, such that the standby battery is disconnected from the electrical system at all times that the main battery is connected to the electrical system and vice versa.

Notwithstanding Applicants' detailed evaluation of the Exide Switch Brochure and submission of expert testimony relative thereto, the Examiner has simply repeated the prior rejection of claims 88, 95, 104, and 105 based on the Exide Switch Brochure and has not provided any response whatsoever to the substance of Applicants' arguments and the Second

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Weiss Declaration, and further has not submitted *any* evidence rebutting the testimony of Mr. Weiss or Applicants' interpretation of the Exide Switch Brochure. The Examiner's failure to address the Second Weiss Declaration in either the Final Office Action or the Advisory Action dated October 11, 2006 ("Advisory Action") is in complete contravention of the requirements of M.P.E.P. § 716.01(B), which provides "[a]ll entered affidavits, declarations, and other evidence traversing rejections *are acknowledged and commented upon* by the examiner *in the next succeeding action*" and "[w]here the evidence is insufficient to overcome the rejection, the examiner *must specifically explain* why the evidence is insufficient." (Emphasis added.) The Examiner's failure to substantively respond to Applicants' argument is also contrary to M.P.E.P. § 707.07(f), which states "[w]here the applicant traverses any rejection, the examiner should, if he or she repeats the rejection, *take note* of the applicant's argument *and answer the substance* of it." (Emphasis added.)

Instead of alleging specific inaccuracies in Applicants' substantive interpretation of the Exide Switch Brochure (which Applicants submit do not exist) or otherwise answering the substance of Applicants' arguments as required by M.P.E.P. § 707.07(f), the Examiner simply notes in the Final Office Action that "[d]ual power sources are well known in the art as evidenced by the new rejections above", (see Final Off. Act. ¶ 11(b)), and, in the Advisory Action, simply directs Applicants' attention to the final rejection contained in the Final Office Action. Thus, the single sentence quoted above was the *only* response given to Applicants' extensive arguments and evidence distinguishing Applicants' claimed invention from the Exide Switch Brochure. Moreover, the allegedly "new" rejection in the Final Office Action pertaining to the Exide Switch Brochure is simply a verbatim replication of the rejection set forth in Paragraph 4 of the Office Action dated March 30, 2006 and, thus, is not "new" at all. The Examiner's only "new" rejections in the Final Office Action are those based on Rodrigues and Leppo, both of which do not discuss or have any other relation to the Exide Switch Brochure and both of which, therefore, wholly fail to contradict or rebut Applicants' and their expert's interpretation of the Exide Switch Brochure. Additionally, as explained in detail below, Rodrigues is merely cumulative to the Exide Switch Brochure, Dierker, and other "jump start" arrangements known in the art.

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Based on the current record in the present case, Applicants' interpretation of the Exide Switch Brochure, as supported by the Second Weiss Declaration, has not been rebutted by *any* arguments or evidence presented by the Examiner. As a result, the interpretation of the Exide Switch Brochure as asserted by Applicants, their expert, and others of skill in the relevant art (e.g., Dougherty et al.) must be the correct interpretation and, absent the Examiner presenting evidence to the contrary, the rejection of independent claims 88, 95, 104 and 105 under 35 U.S.C. § 102(b) in view of the Exide Switch Brochure must be withdrawn.

For purposes of completeness with respect to formally responding in this response to the Examiner's Final Office Action rejection of claims 88, 95, 104 and 105 in view of the Exide Switch Brochure, Applicants submit the following arguments, which are essentially a resubmission of the arguments presented in Applicants' responses dated April 28, 2006, June 15, 2006, and September 26, 2006 with respect to the Exide Switch Brochure. Since the Examiner has never substantively responded to the arguments and evidence presented by Applicants in their responses dated April 28, 2006, June 15, 2006, and September 26, 2006, Applicants respectfully request a formal answer to those arguments (which are represented below) as required by M.P.E.P. § 707.07(f) in view of the evidence submitted by Applicants on April 28, 2006.

The Exide Switch Brochure appears to be an advertisement for the Exide Switch battery, which Applicants have discovered was actually marketed and sold by GNB International, a U.S. subsidiary of the Australian company Pacific Dunlop. (See Second Weiss Decl. ¶ 7.) The Exide Switch Brochure itself is undated, but was evidently received by the U.S. Patent and Trademark Office on July 3, 1989 based on the date of the date stamp noted on the copy of the Exide Switch Brochure supplied by the Examiner. Since there are no markings on the Exide Switch Brochure evidencing its date of publication, if any, the Exide Switch Brochure may not qualify as a printed publication. Applicants addressed the printed publication issue in their responses dated April 28, 2006 and June 15, 2006 and incorporates their arguments regarding the printed publication issue into this response by reference. For the remainder of this argument, Applicants assume, without prejudice and for the sake of argument only, that the Exide Switch Brochure is a proper printed publication.

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As disclosed in the Exide Switch Brochure, the Exide Switch battery has a main battery unit and a reserve battery unit integrated into a single device using so-called Pulsar Technology. The two units are linked by a switching mechanism that controls the discharge of the reserve unit. The main unit is separated from the reserve unit by a one-way diode that serves to allow power to flow from the reserve unit when the switch is pushed to the "Reserve" position. However, because the Exide Switch Brochure is merely a promotional tool, it is rather unclear as to the technical operation of the battery when the switch is pushed to the "Reserve" position. For example, while the Exide Switch Brochure states that "when the main battery goes flat, all you have to do to get instant power is push a switch to the live reserve unit," the Exide Switch Brochure fails to expressly disclose how the main and reserve units interact when the switch is so pushed. In other words, the Exide Switch Brochure fails to expressly disclose whether the two units are placed in parallel, in series, or are completely isolated when the switch is moved from "Main" to "Reserve." For this reason alone, the Exide Switch Brochure does not anticipate Applicants' claims. See M.P.E.P. § 2131.

Nevertheless, in an attempt to more clearly understand the actual operation of the Exide Switch battery, Applicants performed a variety of Internet searches in an attempt to find additional information on the Switch battery and Pulsar Technology. As a result of Applicants' search efforts, Applicants discovered two articles relating to the Switch battery, one published on September 25, 1989 (entitled "Neon colors jazz up APAA show; 'spare' batteries spark interest despite high prices – Automotive Parts and Accessories Association") (hereinafter the "AAPA Show Article"), a little over two months after the date that the U.S. Patent and Trademark Office obtained a copy of the Exide Switch Brochure, and the other published on January 29, 1990 (entitled "'Spare' battery prices ease at discounters – automobile batteries"), only a few months after the AAPA Show Article. Applicants also discovered a laboratory testing report issued by EG and G Idaho, Inc. under a contract with the Department of Energy (entitled "Laboratory testing of GNB switch 12 volt SLI (starting, lighting and ignition) battery"). All of these new references shed additional light on the actual inner-workings of the Exide Switch battery (or "Switch" battery for short) advertised in the Exide Switch Brochure. All three references, as well as information relating to early technological developments in Australia from the 1800s through the 1970s and several additional battery patents, were submitted on April 28, 2006 in the

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form of a Supplemental Information Disclosure Statement with statement under 37 C.F.R. § 1.97(e).

As detailed in the APAA Show Article, the Switch battery features a spare battery housed within the case of the main battery. If the main battery is dead (i.e., discharged to the point that it cannot start the car itself), the operator can open the hood and switch on the spare battery. The spare battery is “added” to the main battery when the switch is flipped to gain cold cranking amperage. In particular, the GNB Switch battery was specified at 640 cold cranking amps (CCAs), including 460 CCAs in the main battery and the balance of the 180 CCAs in the “spare” cells. As is well known in the art, the amount of current supplied by two current sources placed *in parallel* is the sum of the currents supplied by the individual current sources. (See Second Weiss Decl. ¶ 11.) Therefore, based on the APAA Show Article’s recitation of the CCA specification for the Switch battery, the APAA Show Article inherently discloses that the Switch battery is a dual battery system in which the main battery is placed in parallel with the spare battery when the switch is moved from “Main” to “Reserve.” (See *id.* ¶ 12.) Such disclosure or suggestion is verified by the laboratory testing report issued by EG and G Idaho, Inc. (“DOE Report”). (See *id.* ¶ 18.)

The DOE Report was issued based on laboratory testing of the GNB Switch 12 Volt SLI battery (see title of DOE Report). Based on an analysis of the DOE Report and the Exide Switch Brochure performed by Applicants’ expert, Mr. Weiss, the GNB Switch battery discussed in the DOE Report is identical or substantially similar in all material respects to the Switch battery that is the subject of the Exide Switch Brochure. (See *id.* ¶ 17.) As a result, the content of the DOE Report is highly relevant to understanding the operation of the Switch battery disclosed in the Exide Switch Brochure.

The DOE Report clearly states that the tested GNB Switch battery “consists of two batteries in one package which can be connected *in parallel* by a switch for higher cranking energy or reserve capacity.” (See DOE Report, p. 1, Background (emphasis added).) As a result, the Switch battery disclosed in the Exide Switch Brochure is a battery system that utilizes a switch to connect a spare or reserve battery *in parallel* with a main battery when additional power is needed to start a car or otherwise. (See Second Weiss Decl. ¶ 18.)

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Therefore, while the Exide Switch Brochure discloses an electrical system having a main battery, a standby battery, a one-way charging circuit, and a switching device operable in a plurality of operating positions, the Exide Switch Brochure fails to disclose or suggest a switching device that permits use of the standby battery independently of the main battery, such that the main battery and the standby battery are never connected in parallel and, therefore, never supply electrical energy to the electrical system simultaneously, as required by all of Applicants' independent claims. (*See id.* ¶¶ 20-21.) Instead, the Exide Switch Brochure simply discloses a battery system that delivers electrical energy to an electrical system through a main battery either alone or in combination (i.e., in parallel) with a standby battery. (*See id.* ¶ 18.) As a result, the Exide Switch Brochure is merely cumulative to the prior art already cited by the Examiner, including U.S. Pat. No. 6,229,279 issued Dierker et al., which prior art has been addressed repeatedly and at length by Applicants in prior Office Action responses, such prior responses and supporting declarations (including the Declaration of Mr. William Weiss dated November 23, 2005) being incorporated herein by this reference.

Therefore, based on the foregoing, Applicants submit that the recitations of claims 88, 95, 104, and 105 are not disclosed or suggested by the Exide Switch Brochure and respectfully request that claims 88, 95, 104, and 105 be passed to allowance.

5. **Claims 88, 95, 104, and 105 were rejected under 35 U.S.C. § 102(b) as being anticipated by Rodrigues.** Applicants strongly disagree and submit that Rodrigues, like the Exide Switch Brochure and Dougherty et al., simply discloses a multiple battery system in which two batteries are temporarily placed in parallel when additional power is necessary. As a result, Rodrigues, like all the other parallel battery systems cited by the Examiner (e.g., Dougherty et al. and the Exide Switch Brochure), fails to disclose or suggest a dual battery system in which the main battery and the standby battery are never connected in parallel and, therefore, never supply electrical energy to the electrical system simultaneously, as required by all of Applicants' claims.

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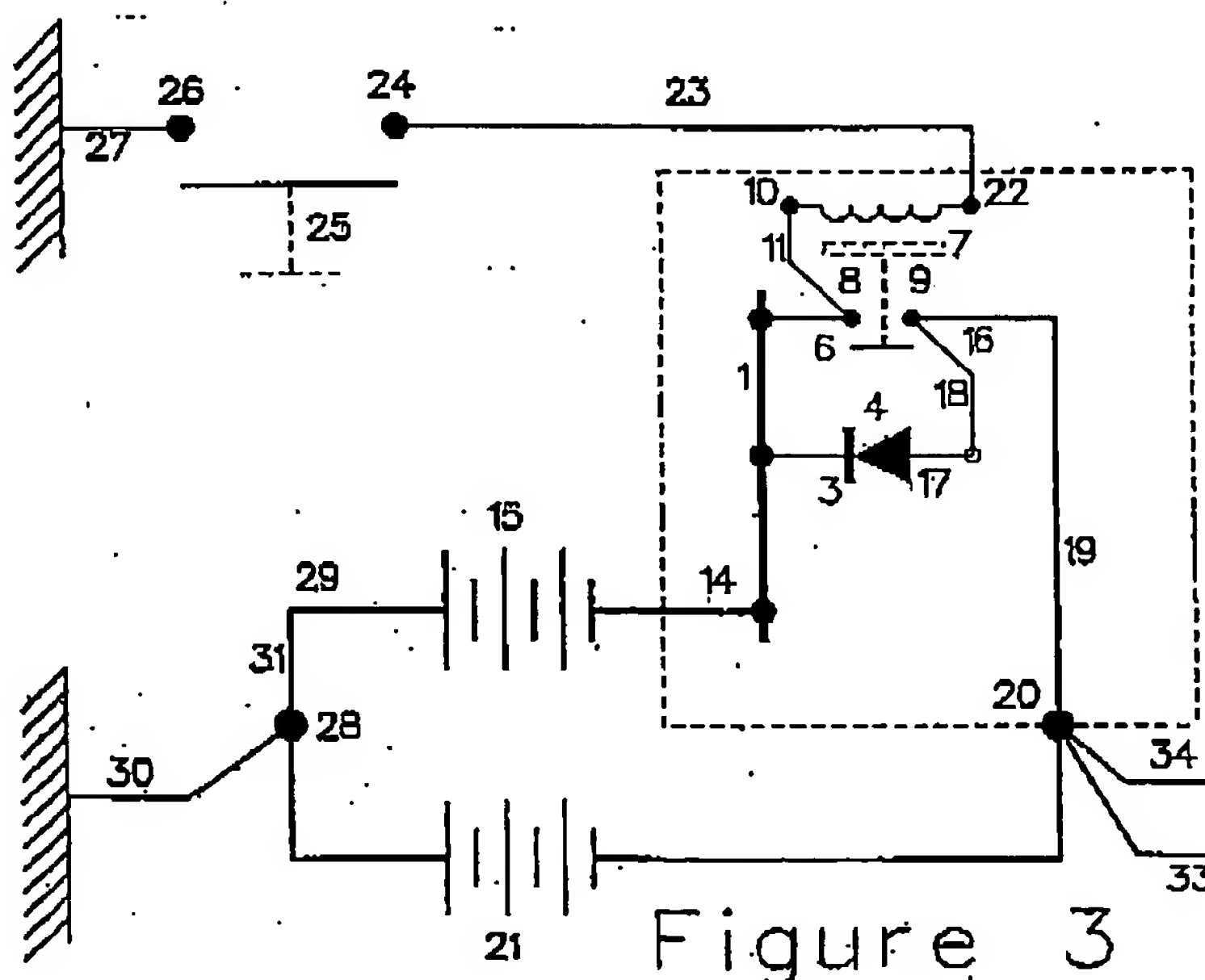
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Rodrigues Does Not Disclose All Limitations of, and Hence Does Not Anticipate, Applicants' Claims 88, 95, 104, and 105

Rodrigues discloses an add-on mechanism to allow a motor vehicle user to "jump start" a main battery (21) through the push of a button when the main battery (21) becomes discharged. (See Abstract; Third Weiss Decl. ¶ 7.) As discussed in the abstract of Rodrigues, the add-on mechanism includes a flat conducting copper bus-bar strip (1) provided with apertures (2, 5, 12) to enable quick and easy bolting of a rectifier (4) and a solenoid relay switch (7) to the positive terminal (14) of an auxiliary battery (15). (See *id.*) The relay switch (7) includes a coil connection (22) to connect a remote momentary switch (25), actuable by a user of the motor vehicle, to a contact terminal (9) for connection to the positive terminal (20) of the main battery (21). (See *id.*) Closure of the user actuable switch (25) energizes the relay coil of relay switch (7), thereby interconnecting the relay switch contacts (8, 9) to short-out or shunt the rectifier (4), thus connecting the auxiliary battery (15) in parallel with the main battery (21). (See *id.*)

The arrangement and operation of the add-on mechanism may be most readily understood through an analysis of Figure 3, which has been reproduced below, and its accompanying text at pages 4 and 5 of Rodrigues. (See Third Weiss Decl. ¶ 8.)



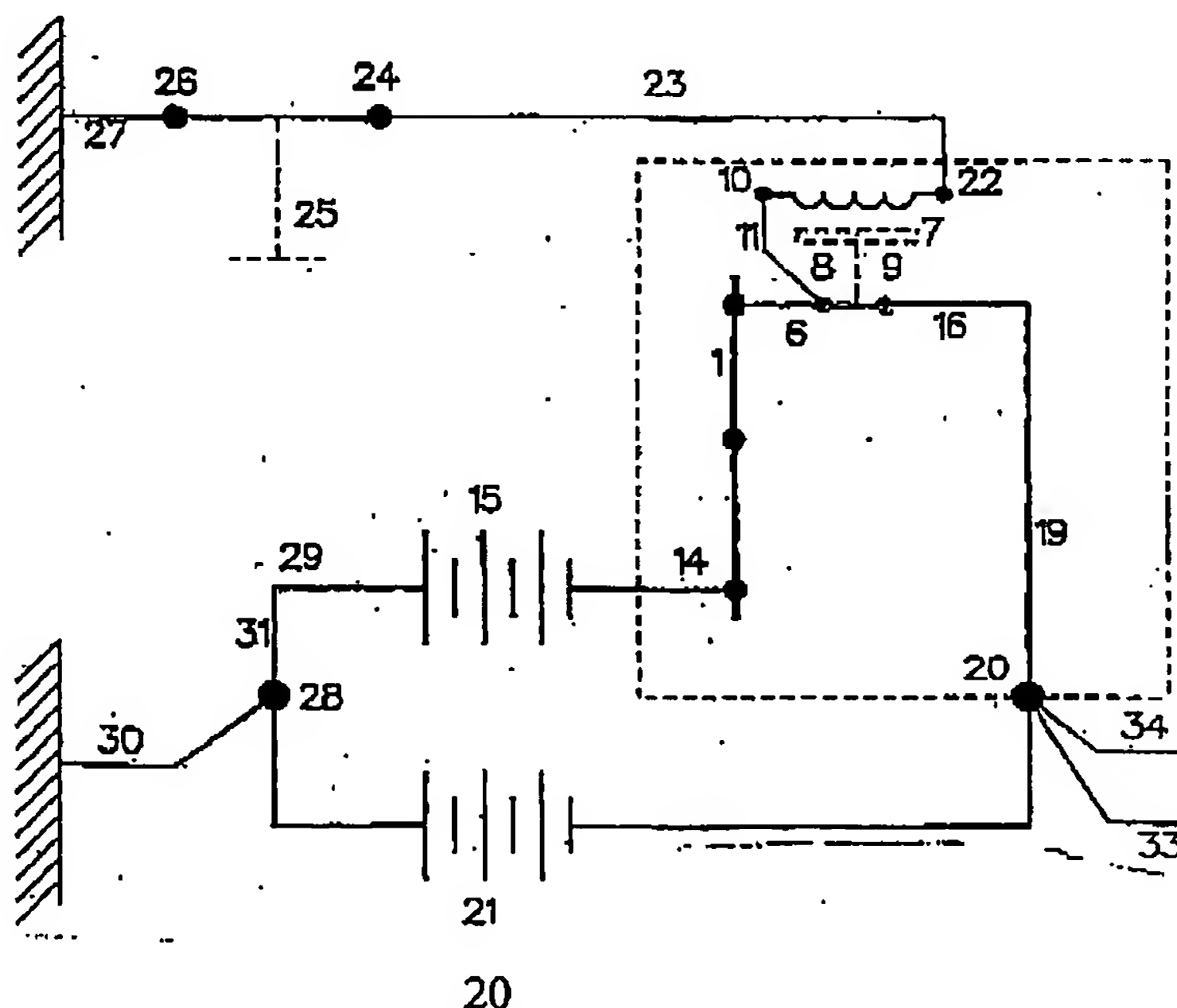
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The add-on mechanism disclosed by Rodrigues includes an auxiliary battery (15), a rectifier (4), a solenoid relay switch (7), and a remote, user-actuable switch (25). (*See id.* ¶ 9.) The add-on mechanism is connected to the main battery (21) such that the negative terminal (29) of the auxiliary battery (15) is connected to the negative terminal (28) of the main battery (21) as depicted in Figure 3 and discussed at page 4, lines 26-29 of Rodrigues. (*See id.*) The rectifier (4) and the solenoid relay switch (7) are connected between the positive terminal (20) of the main battery (21) and the positive terminal (14) of the auxiliary battery (15), such that under normal operating conditions, the relay switch (7) is open and the main battery (21) supplies electrical energy to the starter motor and other functional circuitry (via leads 33 and 34), as well as charging the auxiliary battery (15) via the rectifier (4). (*See id.*)

However, under "jump start" conditions when the remote switch (25) is actuated by a user, the solenoid relay switch (7) is energized and the relay contacts (8, 9) short out or shunt the rectifier (4), thereby causing the positive terminals (14, 20) of both batteries (15, 21) to be connected together. (*See id.* ¶ 10.) Therefore, under "jump start" conditions, the main and auxiliary batteries (20, 15) are connected in parallel. (*See Abstract ("[c]losure of the switch 25 energises the relay coil thereby closing the relay switch contacts 8, 9 to shunt rectifier 4, thus connecting the auxiliary battery 15 in parallel with the main battery 21"); Third Weiss Decl. ¶¶ 10-11.*) Figure 3 of Rodrigues is re-illustrated below under "jump start" conditions. (*See Third Weiss Decl. ¶ 12.*)



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As is evident from the circuit schematic above, when the remote switch (25) is actuated and the solenoid relay switch (7) closes, contact terminal 6 is electrically connected directly to contact terminal 16 by virtue of closure of the solenoid relay switch (7), thereby equivalently electrically connecting the positive terminal (14) of the auxiliary battery (15) to the positive terminal (20) of the main battery (21) through a heavy duty cable (19). (*See id.* ¶ 13.) In other words, when the solenoid relay switch (7) closes, the main battery (21) is connected in parallel with the auxiliary battery (15). (*See id.*)

As a result, Rodrigues does not disclose or suggest at least the switching device recited in Applicants' claims because neither the remote switch (25) nor the solenoid relay switch (7) of Rodrigues is operable in two independent positions such that when either switch (25, 7) is in the first position (e.g., open), the main battery is the sole source of electrical energy to the electrical system and *when either switch (25, 7) is in the second position (e.g., closed), the standby or auxiliary battery is the sole source of electrical energy to the electrical system, such that the main battery and the standby battery are never connected in parallel and, therefore, never supply electrical energy to the electrical system simultaneously.* (*See id.* ¶ 14.) Instead, when the remote and relay switches (25, 7) of Rodrigues are in the second (i.e., closed) position, the main battery (21) and the auxiliary battery (15) both supply electrical energy to the electrical system simultaneously by being connected in parallel. (*See id.*) Thus, when the relay (7) of Rodrigues is in the second position, the main battery (21) and the auxiliary battery (15) both supply electrical energy to the electrical system simultaneously. (*See id.*) Therefore, Rodrigues does not disclose each and every element as set forth in Applicants' claims as is required for the Examiner to properly reject Applicants' claims under 35 U.S.C. § 102(b). *See* M.P.E.P. § 2131.

Accordingly, Applicants submit that claims 88, 95, 104, and 105 are not anticipated by Rodrigues and respectfully request that the Examiner pass claims 88, 95, 104, and 105 to allowance.

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6. **Claims 88, 95, 104, and 105 were rejected under 35 U.S.C. § 102(b) as being anticipated by Leppo. Applicants respectfully disagree.**

Leppo Does Not Disclose All Limitations of, and Hence Does Not Anticipate, Applicants' Claims 88, 95, 104, and 105

Leppo discloses a power distribution system for a portable electronic device, such as a laptop computer. (See Third Weiss Decl. ¶ 15.) The general configuration for the distribution system is depicted in Fig. 1a, (*see id.*), which has been reproduced below.

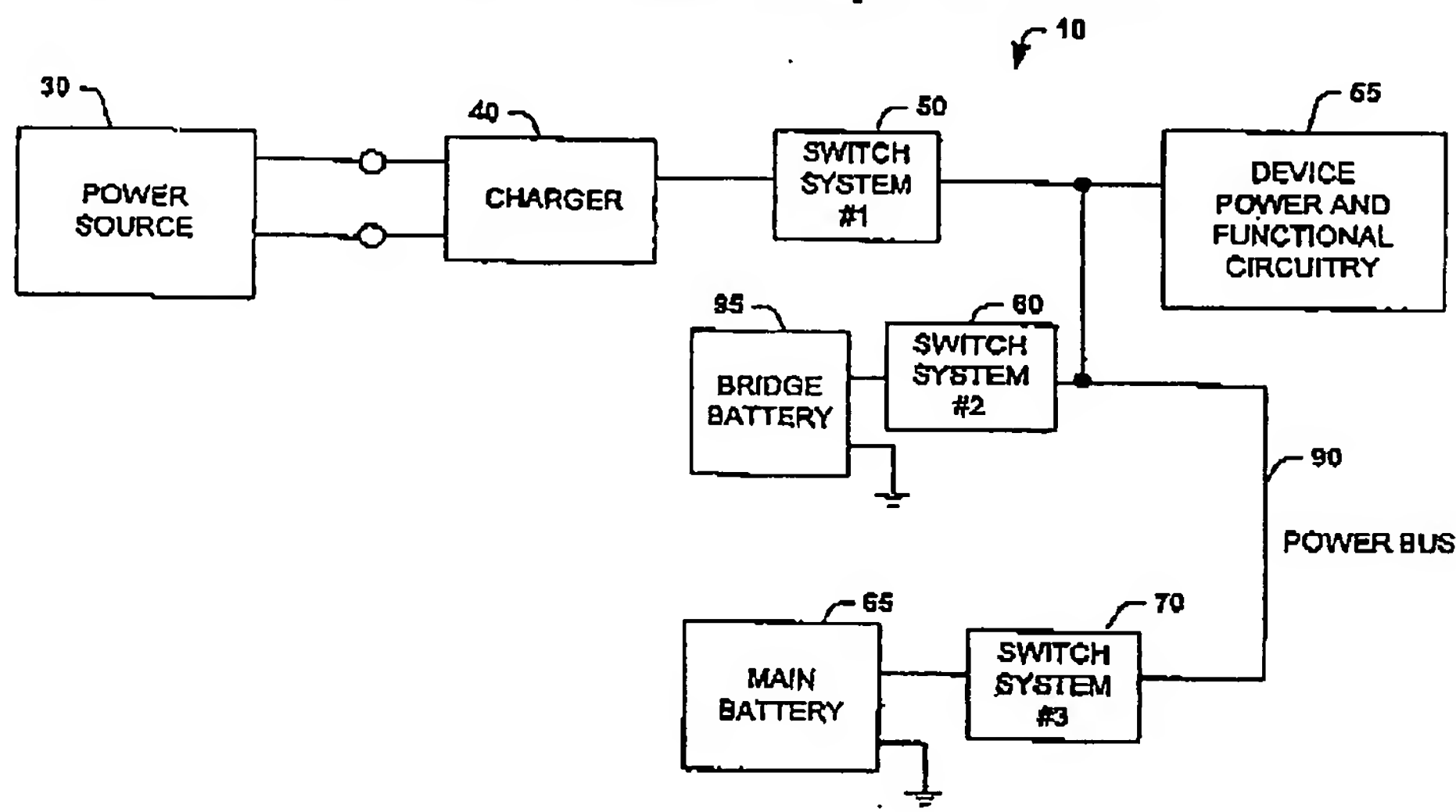


Fig. 1a

As shown in Fig. 1a, the power distribution system (10) includes a charger (40) that receives AC power from a power source (30), a main battery (65), a bridge battery (95), and three switch systems (50, 60, 70). (*See id.* ¶ 16.) The first switch system (50) couples the charger (40) to a power bus (90), wherein the power bus (90) distributes DC power to the functional circuitry (55). (*See col. 4, lines 1-9; Third Weiss Decl. ¶ 16.*) So long as the power source (30) is supplying AC power to the charger (40), the charger (40) supplies DC power to the functional circuitry (55) and recharges the main battery (65) through the third switch system (70). (*See col. 4, lines 13-15; Third Weiss Decl. ¶ 16.*) The second switch system (60) couples the bridge battery (95) to the power bus (90). (*See col. 4, lines 10-11; Third Weiss Decl. ¶ 16.*) The third switch system (70) couples the main battery (65) to the power bus (90). (*See col. 4,*

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lines 11-13; Third Weiss Decl. ¶ 16.) In a preferred embodiment, as depicted in Fig. 1b and Fig. 2, the first and second switch systems (50, 60) are implemented with diodes (51, 61) and the third switch system (70) is implemented with a diode (75) and a FET (71) in combination. (See col. 4, lines 24-27; Third Weiss Decl. ¶ 16.)

Operation of the power distribution system (10) of Leppo is best understood with reference to Fig. 1b, (see Third Weiss Decl. ¶ 17), which figure has been reproduced below.

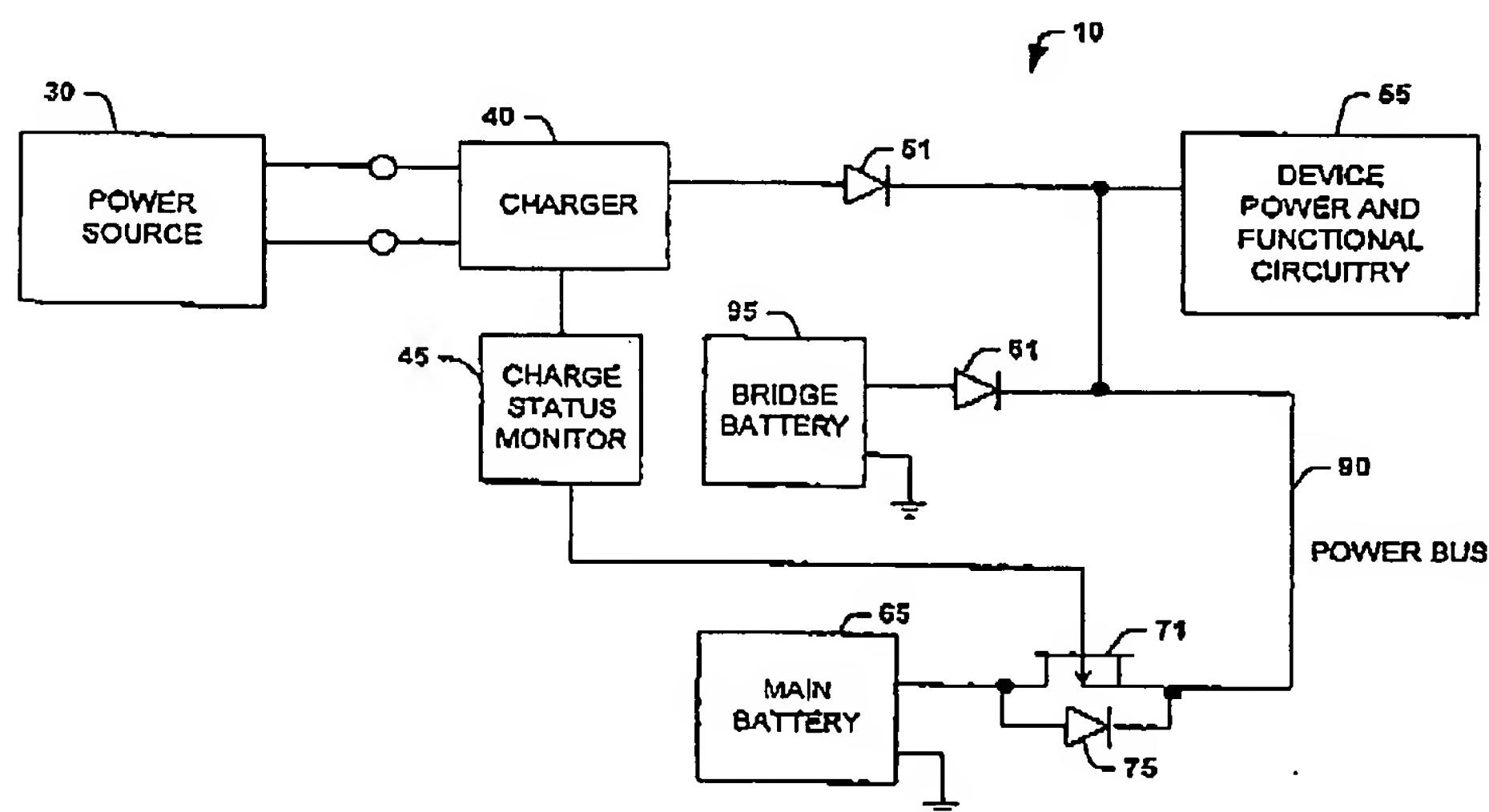


Fig. 1b

When the charger (40) is connected, the charger (40) supplies DC power to the functional circuitry (55) and recharges the main battery (65) through the FET (71). (See col. 4, lines 6-8, 51-53; Third Weiss Decl. ¶ 18.) The power distribution system (10) also includes a charge status monitor (45), preferably implemented with a timing circuit, to limit the amount of time the main battery (65) is charged in order to prevent damage to the main battery (65). (See col. 4, lines 41-56; Third Weiss Decl. ¶ 18.) In accordance with the express teachings of Leppo, only the main battery (65) is charged from the charger (40) via the FET switch (71). (See Third Weiss Decl. ¶ 18.) The bridge battery (95) is never charged. (See *id.*)

Therefore, to summarize, the power distribution system disclosed by Leppo utilizes two batteries and an AC/DC charger (40). The charger (40) charges the main battery (65) via a FET switch (71), but the bridge or auxiliary battery (95) is never recharged. Thus, Leppo discloses a

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circuit for charging the main battery, but does not disclose a one-way charging circuit as recited in Applicants' claims because Applicants' "one-way charging circuit" is connected between the positive output terminal of the main battery and the positive output terminal of the standby battery so as to facilitate charging of the *standby battery*. (See claims 88, 104, and 105; Third Weiss Decl. ¶ 19.) Thus, instead of charging the *main battery* as in Leppo, Applicants' one-way charging circuit charges the *standby battery*. (See Third Weiss Decl. ¶ 19.) Moreover, the charging circuit recited in Applicants' claims is from battery-to-battery, not from AC/DC charger-to-battery. (See *id.*)

Additionally, Applicants' claimed apparatus includes a switching device that is operable in at least two positions. In the first position, the switching device connects the positive output of the main battery to the system positive output (i.e., the electrical system) and disconnects the positive output of the standby battery from the system positive output. (See claims 88, 104, and 105.) In the second position, the switching device connects the positive output of the standby battery to the system positive output (i.e., the electrical system) and disconnects the positive output of the main battery from the system positive output. (See claims 88, 104, and 105.)

By contrast, the switching systems (50, 60, 70) disclosed in Leppo do not have two or more positions. (See Third Weiss Decl. ¶ 20.) Instead, each switching system (50, 60, 70) in Leppo has only one *position*, although each switching system (50, 60, 70) has two or more operating *states*. (See *id.*) For example, the switching systems (50, 60) that are connected to the outputs of the charger (40) and the bridge battery (95) can be in the "on" state or the "off" state, but such systems (50, 60) always remain in the same position (i.e., fixedly connected between the power bus (90) and a respective one of the charger (40) and the bridge battery (95)). (See *id.*) The switching system (70) connected between the main battery (65) and the power bus (90) may have more than two states when taking into account the charging operation. (See *id.*) For instance, the main battery switching system (70) may have an "on" state and an "off" state (i.e., for the diode (75)) with respect to supplying DC power to the power bus (90), as well as a "charge" state and a "non-charge" state (i.e., for the FET (71)) with respect to charging the main battery (65). (See *id.*) Regardless of the number of *states* that may be entered by the main battery switching system (70), the system (70) always remains in a single *position* (i.e., fixedly connected between the main battery (70) and the power bus (90) and, when considering main

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battery charging, further fixedly connected between the main battery (70) and the charge status monitor (45)). (*See id.*) To individually select a battery (65, 95) or the charger (40) to supply DC power, Leppo relies solely on the inherent operation of diodes, not the use of multi-position switches, to control which power source is supplying energy to the functional circuitry (55) at any given time. (*See id.* ¶ 21.)

Therefore, based on the foregoing, Leppo fails to disclose at least a one-way charging circuit and a switching device as specified and arranged in Applicants' claims 88, 95, 104, and 105. Consequently, the Examiner has failed to show that Leppo discloses each and every element *as set forth in* Applicants' claims. *See* M.P.E.P. § 2131; Third Weiss Decl. ¶ 24. As a result, Applicants respectfully request that the Examiner withdraw the rejection of claims 88, 95, 104, and 105 under 35 U.S.C. § 102(b) and pass claims 88, 95, 104, and 105 to allowance.

Rejections under 35 U.S.C. § 103(a)

7. **Claims 89-92, 94, 96, and 97 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the Exide Switch Brochure.** Claims 89-92, 94, 96, and 97 are dependent upon claim 88, which claim has been shown allowable above. Therefore, at least because claims 89-92, 94, 96, and 97 each introduce additional subject matter that, when considered in the context of the recitations of claim 88, constitutes patentable subject matter, Applicants respectfully submit that the recitations of claims 89-92, 94, 96, and 97 are not disclosed or suggested by the Exide Switch Brochure. Therefore, Applicants respectfully submit that claims 89-92, 94, 96, and 97 are in proper condition for allowance.

8. **Claim 93 was rejected under 35 U.S.C. § 103(a) as being unpatentable over the Exide Switch Brochure in view of Geibl et al. (hereinafter "Geibl").** Claim 93 is dependent upon claim 88 (through intervening claim 91), which claim has been shown allowable above. Therefore, at least because claim 93 introduces additional subject matter that, when considered in the context of the recitations of base and intervening claims 88 and 91, constitutes patentable subject matter, Applicants respectfully submit that the recitations of claim 93 are not disclosed or suggested by the Exide Switch Brochure and/or Geibl, whether taken alone or in

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combination. Therefore, Applicants respectfully submit that claim 93 is in proper condition for allowance.

9. **Claims 99 and 100 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the Exide Switch Brochure in view of Hiroyuki et al. (hereinafter "Hiroyuki").** Claims 99 and 100 are dependent upon claim 88, which claim has been shown allowable above. Therefore, at least because claims 99 and 100 each introduce additional subject matter that, when considered in the context of the recitations of claim 88, constitutes patentable subject matter, Applicants respectfully submit that the recitations of claims 99 and 100 are not disclosed or suggested by the Exide Switch Brochure and/or Hiroyuki, whether taken alone or in combination. Therefore, Applicants respectfully submit that claims 99 and 100 are in proper condition for allowance.

10. **Claims 99-102 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the Exide Switch Brochure in view of prior art disclosed by Applicants in the specification, and further in view of Cook et al. (hereinafter "Cook").** Claims 99-102 are dependent upon claim 88, which claim has been shown allowable above. Therefore, at least because claims 99-102 each introduce additional subject matter that, when considered in the context of the recitations of claim 88, constitutes patentable subject matter, Applicants respectfully submit that the recitations of claims 99-102 are not disclosed or suggested by the Exide Switch Brochure, Cook and/or the prior art disclosed by Applicants in the specification, whether taken alone or in combination.

In addition and in contrast to the Examiner's assertions, Applicants' background does not disclose discharge cycling of the standby battery. Instead, Paragraphs [0010] through [0013] of Applicants' specification discuss the negative impact of placing a discharged main battery in parallel with a reserve or standby battery through use of a shunt to bypass a charging diode, as well as the discharge effects of leaving the reserve battery engaged for too long a period of time. (See Third Weiss Decl. ¶ 25.) The discussed discharge effects include an undesirably long time to recharge the reserve battery. (See *id.*) However, the discharge of the reserve battery due to the *occasional or overextended* use of the reserve battery in parallel with the main battery is not

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a regular or *periodic* discharge when the main battery is operating normally, as recited in Applicants' claims 101 and 102. (*See id.* ¶ 26.) That is, there is no regularity or periodicity associated with using the reserve battery to simply jumpstart the main battery as is discussed in Applicants' background. (*See id.*) As a result, Applicants' background does not disclose the discharge cycling covered by Applicants' claims 101 and 102. (*See id.*)

Cook does not overcome the deficiencies in the prior art identified by Applicants. Rather, Cook discloses intentionally limiting the time that the reserve battery is in use *after* the reserve battery has been placed in parallel with the main battery in order to reduce the amount of discharge of the reserve battery. (*See* col. 6, lines 18-35 and 55-57; col. 7, lines 1-12; Third Weiss Decl. ¶ 27.) In other words, Cook discloses a timer arrangement that insures that the reserve battery is only used for the time necessary to jump start the main battery by limiting the amount of time that the reserve battery remains connected in parallel with the main battery after being engaged by the wireless remote control. (*See* col. 2, lines 8-12, 21-26, and 33-39; col. col. 6, lines 18-35 and 55-57; col. 7, lines 1-12; Third Weiss Decl. ¶ 27.) Cook does not disclose or suggest an automated discharge cycle for the reserve battery even though the main battery is operating normally. (*See* Third Weiss Decl. ¶ 27.)

Therefore, Applicants respectfully submit that claims 99-102 are not disclosed or suggested by the prior art of record and, therefore, are in proper condition for allowance.

11. **Claims 98 and 103 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the Exide Switch Brochure in view of Krieger et al. (hereinafter "Krieger").** Claims 98 and 103 are dependent upon claim 88, which claim has been shown allowable above. Therefore, at least because claims 98 and 103 each introduce additional subject matter that, when considered in the context of the recitations of claim 88, constitutes patentable subject matter, Applicants respectfully submit that the recitations of claims 98 and 103 are not disclosed or suggested by the Exide Switch Brochure and/or Krieger, whether taken alone or in combination. Therefore, Applicants respectfully submit that claims 98 and 103 are in proper condition for allowance.

In addition to rejecting claim 98 in view of the Exide Switch Brochure and Krieger, the Examiner appears to suggest that claim 98 may still include matter (i.e., the "third operating

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position”) that lacks support in the specification. As explained in detail in Applicants’ responses dated April 28, 2006 and June 15, 2006, the phrase “third operating position” as used in claim 98 is supported by Applicants’ originally filed specification.

As clearly stated in paragraph [0080] of the application:

Finally, a *tertiary* or storage *operating* mode or *position* 370 would be provided wherein the switching device 300 would disconnect both the main battery positive output 110 and the auxiliary battery positive output 210 from the common positive terminal 310 when not in use.

(Emphasis added.) The term “tertiary” means “third” as defined in various dictionaries (see set of definitions from www.dictionary.com attached to response dated April 28, 2006). Thus, Applicants’ originally filed specification clearly supports Applicants’ use of a “third operating position” in claim 98.

The Examiner appears to maintain her assertion that, since the third position shuts the battery system “OFF”, the position of the *switching device* is “non-operating.” Applicants again disagree. While the third “operating” position of the switching device may indeed disconnect both the main battery and the standby battery from the electrical system, such position is still an “operating” position from the perspective of the *switching device*. In other words, the third *operating* position of the *switching device* renders the batteries non-operating. The term “third operating position” as recited in claim 98 relates to the switching device, *not* the batteries. Therefore, Applicants submit that the term “third operating position” as used claim 98 is not only supported by Applicants’ specification, but is also used properly in the context of operation of the claimed switching device. Nevertheless, for purposes of moving prosecution forward, Applicants have simplified the operation of the switching device in the claims by removing the term “operating” as a modifier of the word “position”, such that the switching device has “positions” instead of “operating positions.” Support for such use of the term “position” instead of “operating position” can be found in Paragraph [0082] of Applicants’ specification.

Based on the foregoing, Applicants respectfully request that the Examiner withdraw the rejections of claim 98 and 103 under 35 U.S.C. § 103(a).

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New Claims

12. Applicants have herein added new claims 106-108 for consideration by the Examiner. Applicants submit that new claims 106-108 are fully supported by Applicants' originally filed specification and are patentably distinct from the prior art of record. In particular, support for new claims 106-108 can be found in the specification at least at FIGs. 3B & 4B, as well as at Paragraphs [0033], [0035], [0043]-[0046], [0083]-[0089], [0098], [0100], and [0101]. Accordingly, Applicants request that the Examiner pass new claims 106-108 to allowance.

With the addition of claims 106-108 and the cancellation of claims 1-87, twenty-one claims remain pending in the present application, five of which are independent. Applicant had previously paid for examination of eighty-seven claims, four of which were independent. Therefore, Applicant has added one extra independent claim by virtue of the present submission. Applicants submit herewith the filing fee under 37 C.F.R. § 1.16(h) for examination of the one extra independent claim. If any additional fee is due for examination of the pending claims, please charge such additional filing fee to the undersigned's Deposit Account No. 50-1111 and provide a supporting explanation for the additional fees in the Examiner's next correspondence.

Information Disclosure Statement

13. Applicants include herewith, as part of the present submission, an information disclosure statement under 37 C.F.R. § 1.97(b)(4) to cite several references cited by the Examiner in co-pending, child Application Serial No. 10/708,739. Pursuant to 37 C.F.R. § 1.114, an information disclosure statement may form part of a submission in support of an RCE. Additionally, under 37 C.F.R. § 1.97(b)(4), the Examiner must consider an information disclosure statement filed before the mailing of a first Office Action after the filing of an RCE. Applicants submit that the claims of the present application are patentable over the references cited in the enclosed information disclosure statement.

14. The Examiner is invited to contact the undersigned by telephone, facsimile or email if the Examiner believes that such a communication would advance the prosecution of the instant application. Please charge any necessary fees associated herewith, including extension of

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time fees (if applicable and not paid by separate check), to the undersigned's Deposit Account No. 50-1111.

Respectfully submitted,

By: 

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